CLAIMS

What is claimed is:

1. A method for automatically configuring a parameterizing surface for parameterizing a controller for a machine, in particular a machine tool or a production machine, comprising the steps of:

   a) automatically identifying at startup of the machine currently connected machine components via a data network which connects the machine components with each other,

   b) automatically identifying a structure of the data network to determine an actual machine topology,

   c) comparing the actual machine topology with stored desired machine topologies, and

   d) if the actual machine topology does not match one of the stored desired machine topologies, generating from the determined actual machine topology a dedicated parameterizing surface that is configured for the actual machine topology, and

   e) for parameterizing the controller, displaying to a user only parameters and/or functions of the identified machine components.

2. The method of claim 1, wherein after performing step b) and c), requiring confirmation of the identified actual machine topology by the user before continuing with step d).

3. The method of claim 1, and further comprising the step of automatically pre-assigning values to the parameters of the identified machine components, wherein the pre-assigned values can be subsequently changed by the user through the parameterizing surface.

4. The method of claim 1, and further comprising the step of assigning an ID number to each currently connected machine component for automatically identifying the currently connected machine components.

5. The method of claim 4, wherein the ID number includes data of the corresponding machine component, said data selected from the group consisting of serial number, order number, software version, machine version, manufacturer identification, manufacturer name and performance data.

6. A data network for connecting machine components of a machine, in particular of a machine tool or a production machine, wherein the machine components comprise uniform data interfaces connected to the data network for exchange of data between the machine components, said data interfaces implemented as physical point-to-point connections, and wherein the machine components include an intelligent component with a controller and a unique ID number.

7. The data network of claim 6, wherein the uniform data interfaces comprise physical interfaces selected from the group consisting of Ethernet interfaces, FireWire interfaces and USB interfaces.

8. The data network of claim 6, wherein the ID number includes a serial number, an order number, a software version, a machine version, a manufacturer identification, a manufacturer name or performance data, or a combination thereof.

9. The data network of claim 6, wherein the machine components are selected from the group consisting of power controller, motor, sensor, transducer, input/output unit, controller, and regulator.